IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Fan Bin et al.	Art Unit	: 2851
Serial No.	: 10/506,304	Examiner	: William C. Dowling
Filed	: September 1, 2004	Conf. No.	: 3220
Title	: A COLOR PROJECTION DISPLAY SYSTEM		

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

(1) Real Party in Interest

The real party in interest is Kinoptics Technologies Inc., the assignee of the pending application.

(2) Related Appeals and Interferences

There are currently no related appeals or interferences.

(3) Status of Claims

Claims 1-12 and 14 are cancelled.

Claims 13 and 15-53 stand rejected and are the subject of this appeal.

(4) Status of Amendments

No amendments have been filed subsequent to the final rejection. All prior amendments have been entered.

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(5) Summary of Claimed Subject Matter

Claims 37, 38, and 43 are the only independent claims in this appeal.

Claim 37 covers systems that include first and second liquid crystal on silicon (LCoS) display panels each comprising a micro dichroic filter array. See specification at, e.g., page 4, lines 6-10 and Fig. 1, reference characters 2 and 3. Each micro dichroic filter array includes multiple elements configured to transmit a portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion of the light beam, so that the polarization of the unfiltered portion is not changed when leaving the display panel. See specification at, e.g., page 5, lines 15-17 and page 6, lines 4-8. Each display panel is configured to reflect and modulate filtered portions from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions is changed when leaving the display panel. See specification at, e.g., page 4, lines 17-18. The systems also include a polarizing beam splitter assembly configured so that during operation the polarizing beam splitter assembly combines the filtered portions of a first light beam reflected by the first display panel with filtered portions of a second light beam reflected by the second display panel to form an image beam, and the combined filtered portions of the first and second light beams have mutually orthogonal polarization states. See specification at, e.g., page 4, lines 10-13, page 4, line 18 – page 5, line 1, and Fig. 1, reference character 1.

Claim 38 covers systems that include a polarizing beam splitter assembly including a plurality of polarizing beam splitter coatings arranged in orthogonal planes, and first and second

display panels positioned relative to the polarizing beam splitter assembly so that during operation the polarizing beam splitter assembly combines filtered light reflected from the first and second display panels to form an image beam. See specification at, e.g., page 6, lines 14-19 and Fig. 2, reference characters 11, 2 and 3. The first and second display panels each comprise a micro dichroic filter array, each micro dichroic filter array comprising multiple elements each configured to transmit a corresponding portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion, so that the polarization of the unfiltered portion is not changed when leaving the display panel. See specification at, e.g., page 4, lines 7-10, page 5, lines 15-17 and page 6, lines 4-8. Each display panel is configured to reflect and modulate the filtered portion from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions are changed when leaving the display panel. See specification at, e.g., page 6, lines 4-8.

Claim 43 covers methods that include directing a first light beam to reflect from a first color liquid crystal on silicon (LCoS) display panel and a second light beam to reflect from a second color LCoS display panel. See specification at, e.g., page 4, lines 6-10 and Fig. 1, reference characters 2 and 3. The first and second color LCoS display panels each comprising a micro dichroic filter array, each micro dichroic filter array comprising multiple elements each configured to transmit a corresponding portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each filter being further configured to reflect a portion of the incident light beam, the

reflected portion being an unfiltered portion, so that the polarization of the unfiltered portion is not changed when leaving the display panel. See specification at, e.g., page 5, lines 15-17 and page 6, lines 4-8. Each display panel is configured to reflect and modulate the filtered portion from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions are changed when leaving the display panel, See specification at, e.g., page 4, lines 17-18. The methods also include combining the filtered portions of the first light beam reflected by the first display panel with the filtered portions of the second light beam reflected by the second display panel to form an image beam, wherein the combined filtered portions of the first and second light beams have mutually orthogonal polarization states. See specification at, e.g., page 4, lines 10-13, page 4, line 18 – page 5, line 1, and Fig. 1, reference character 1.

(6) Grounds of Rejection to be Reviewed on Appeal

A. Whether claims 37, 13-16, 18, 20-24, 33, 35-36, 43-46, 48-50, 51, and 52 are patentable under 35 U.S.C. 103(a) over U.S. 5,552,840 ("Ishii") in view of U.S. 5,612,814 ("Yang").

B. Whether claims 17 and 47 are patentable under 35 U.S.C. 103(a) over Ishii and Yang in view of U.S. 6,280,034 ("Brennesholtz").

C. Whether claim 34 is patentable under 35 U.S.C. 103(a) over Ishii and Yang in view of U.S. 6,857,747 ("Pentico").

D. Whether claims 37-43, 45-46, 48-50, 51-53, 13, 15-16, 19, 23, 25-33, and 36 are patentable under 35 U.S.C. 103(a) over U.S. 6,490,087 ("Fulkerson") in view of Yang.

(7) Argument

A. The Rejection of Claims 37, 13-16, 18, 20-24, 33, 35-36, 43-46, 48-50, 51, and 52 Under 35 U.S.C. § 103(a) Over Ishii in View of Yang Should Be Reversed

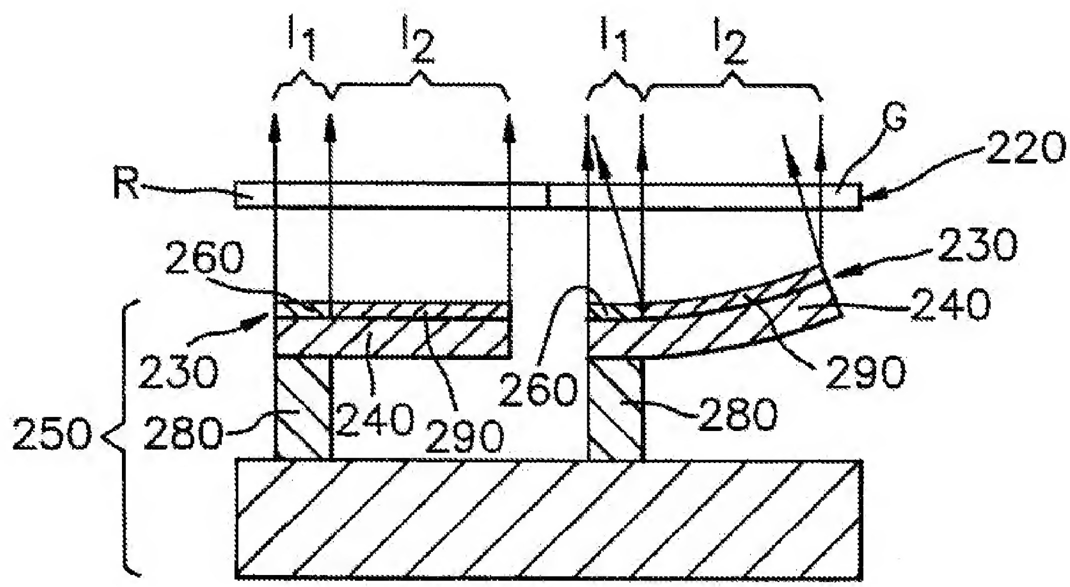
These claims cover systems or methods involving first and second liquid crystal on silicon (LCoS) display panels each "comprising a micro dichroic filter array, each micro dichroic filter array including multiple elements configured to transmit a portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion of the light beam, so that the polarization of the unfiltered portion is not changed when leaving the display panel." In other words, the claims cover systems and methods in which unfiltered light is *reflected*, rather than being *absorbed*, by each element of the filter array.

<u>Yang does not teach a dichroic filter means configured to reflect an unfiltered portion of the light beam</u>

The Office acknowledges that Ishii does not teach a "dichroic filter as the filter means" and relies on Yang for the teaching of dichroic color filter means. However, nowhere does Yang disclose that his pixel filters reflect an unfiltered portion of the incident light. Rather, Yang states "[e]ach of the pixel filters is capable of *transmitting* only one of the primary light beams onto each of the actuated mirrors 230" (<u>Yang</u>, col. 4, lines 60-62). Yang is silent regarding the light that is not transmitted.

Furthermore, as would have been understood by one of ordinary skill in the art, it is clear from studying Yang's systems that his filters must absorb, not reflect, unfiltered light. Fig. 3B from Yang is reproduced below to assist in explaining this. Id., Fig. 3B.

FIG. 3B



Yang's system (shown in Fig. 3B) operates by using actuated mirrors 220 to change the optical path of the light in his system by chaning the orientation of the mirrors. Id., col. 4, lines 33-36. Fig. 3B shows two pixels. The pixel on the left is oriented so that mirror 230 reflects normally incident light (I_2) back along the bath from which it came. This light contributes to a projected image, being directed by the mirror 220 along a path to projection screen 90 (not shown in Fig. 3B, but see Fig. 2). The mirror in the pixel shown in the right hand side of Fig. 3B, on the other hand, is oriented to deflect light away from the light path that leads out to projection screen 90. Id., Fig. 2.

As would have been understood by one skilled in the art, Yang provides a filter array 220 in the path of the light in order to provide a full-color image. Id., col. 4, lines 47-50 (disclosing use of red, green, and blue filters). Specifically, each mirror 230 is provided with a corresponding filter element in filter array 220 so that each pixel appears either red, green, or blue. Id. It is clear from Fig. 3B that in order to properly filter the unwanted colors, each filter element in array 220 must absorb unfiltered light. If they were to reflect unfiltered light, as the Office suggests, the reflected unfiltered light would always be directed towards projection screen 90. If this were the case, each pixel would be bright whether the corresponding mirror 230 was actuated or not, the only difference being whether the pixel image included filtered light and the projection system would be unable to achieve any meaningful contrast in the projected image.

The Office relies on the statement by Yang that "each of the pixel filters includes a dichroic coat, made of a dielectric material, e.g., MgF_2" (id., col. 4, lines 62-63) for its assertion that Yang discloses the claimed dichroic filter array. Office action dated November 18, 2008 (hereinafter referred to as the "Office action"), p. 6, section 5. However, there is no evidence that the "dichroic coat" disclosed by Yang provides the same effect is the claimed dichroic filter array. To the contrary, Yang describes his "dichroic coat" as being made from a *single* dielectric material. One of ordinary skill would have understood that a dichroic filter that reflects unfiltered light is made of at least two different materials. See, e.g., U.S. Patent No. 4,355,888, which discloses dichroic filters formed by "coating a transparent substrate medium with alternate layers of compositions having different indices of refraction, that is compositions of multilayer configuration consisting of alternating layers of high and low refractive index materials." U.S. 4,355,888, col. 4, line 67 – col. 5, line 3.

Furthermore, the Examiner himself admits that the term "dichroic" has multiple meanings, but insists, without providing any evidence, that the way Yang uses the term implies that Yang's pixel filters reflect unfiltered light (Office action, pp. 6-7, section 5).

Accordingly, neither Ishii nor Yang disclose systems or methods that includes micro dichroic filter arrays that operate to reflect unfiltered portions of light as required by the claims.

The Proposed Modification Would Render the Prior Art Unsatisfactory for its Intended Purpose

Moreover, modifying Ishii's system to include a micro dichroic filter array would render Ishii's system unsatisfactory for its intended purpose because it would result in a display that reflects light of all primary colors from each pixel, instead of light of a single primary color as intended by Ishii.

Specifically, the Office relies on Ishii's embodiment shown in Fig. 7 (reproduced below) as the basis for its rejection. Office action, p. 2, section 1. In this embodiment, color filters 94a-c are located on silicon substrate 91, separated from transparent glass substrate 95 by liquid crystal 92. Ishii, col. 13, lines 39-65.

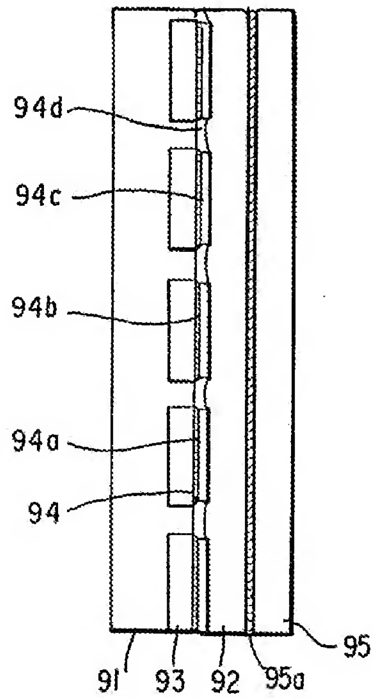


FIG.7

Accordingly, as would have been understood by one of ordinary skill in the art, light incident on the display from the side of transparent substrate 95 traverse liquid crystal 92 before contacting filters 94a-c. Ishii's display produces a full-color image by absorbing unfiltered light, and all filtered light (light transmitted by 94a-c) is reflected by electrode 94, traverses liquid crystal 92 a second time, and exits the display panel through transparent substrate 95. The polarization state of the filtered light exiting the display panel is modulated by liquid crystal 92.

As would have been understood by one of ordinary skill, replacing the Ishii's filters 94a-c with dichroic filters that reflect unfiltered light would mean that both filtered and unfiltered light exit the display panel having traversed liquid crystal twice. Accordingly, the polarization states of both the filtered and unfiltered light would be modulated by liquid crystal 92, contrary to

applicant's claimed invention. Moreover, since each pixel would now reflect both filtered and unfiltered light, the modification suggested by the Examiner would result in a monochromatic display (one in which every bright pixel appears white when white light illumination is used, not a specific color), not a color display as disclosed by Ishii.

According to the Office, it would have been obvious "to place such [i.e., Yang's] color filters at *any position* between the entrance to the display panels and the particular modulating elements because such a structure *would operate in alike manner*" and "to form the filter elements integrally with the panels so as to be a part of the panels themselves because such an integral display panel eliminates the necessity for aligned of optical elements and simplifies the structure." Office action, p. 3, section 1 (Emphasis added.) However, the Office provides absolutely no basis for its conclusions. Moreover, the rationale advanced by the Office simply does not make sense. The filter array disclosed by Ishii is part of the display panel already (see, Ishii, Fig. 7), so there would be no additional benefit to eliminating "the necessity for aligned of optical elements and simplifies the structure," as alleged by the Office. In fact, as would have been understood by one having ordinary skill, moving the filter array from its position in Ishii's display would, if anything, complicate the manufacturing process because it would involve additional patterning of filter elements on the glass substrate and subsequent alignment of the filter array on the glass substrate with the electrodes on the silicon substrate.

For at least these reasons, it would not have been obvious to a person having ordinary skill in the art to modify the system disclosed by Ishii in a manner suggested by the Office.

The Combination Proposed by the Office is based on Impermissible Hindsight

As discussed above, neither Ishii nor Yang disclose or suggest systems or method that includes "multiple elements configured to transmit a portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion of the light beam, so that the polarization of the unfiltered portion is not changed when leaving the display panel." Rather, to the extent the Office relies on their disclosure, both references disclose systems that utilize absorptive color filter arrays whose principal of operation is fundamentally different from the claimed systems and methods. The only place where the claimed operating principal is discussed is in applicant's own specification. Accordingly, the Office's rejection is a hindsight reconstruction where they have used applicant's claims as a roadmap to reconstruct the invention from the prior art.

For at least these reasons, the rejection of claims 37, 13-16, 18, 20-24, 33, 35-36, 43-46, 48-50, 51, and 52 under 35 U.S.C. § 103(a) over Ishii in view of Yang should be reversed

B. The Rejection of Claims 17 and 47 Under 35 U.S.C. § 103(a) Over Ishii and Yang In View Of Brennesholtz Should Be Reversed

Claims 17 and 47 depend from claims 37 and 43, respectively. The Office relies on Brennesholtz for its disclosure cyan, magenta, and yellow filters. Office action, p. 3, section 2. However, Brennesholtz does not cure Ishii's or Yang's infirmities with respect to the claims 37 and 43 discussed above. Accordingly, the rejection of claims 17 and 47 under 35 U.S.C. § 103(a) over Ishii and Yang in view of Brennesholtz should be reversed for at least those reasons set forth above with respect to claims 37 and 43.

C. The Rejection Of Claim 34 Under 35 U.S.C. § 103(a) Over Ishii and Yang In View Of Pentico Should Be Reversed

Claim 34 depends from claim 37. The Office relies on Pentico because it "further clarifies the use of quarter wave plates on a light path from two reflective modulators to a PBS to separately modify the rotation of light." Office action, 2008, p. 6, section 4. However, Pentico does not cure Ishii's or Yang's infirmities with respect to the claim 37 discussed above. Accordingly, the rejection of claim 34 under 35 U.S.C. § 103(a) over Ishii and Yang in view of Pentico should be reversed for at least those reasons set forth above with respect to claim 37.

In summary, neither Ishii, Yang, nor Pentico, either alone or in combination, disclose or render obvious a system that includes all the limitations set forth in claims 13-18, 20-24, 33, and 35-37. Applicants submit that claims 13-18, 20-24, 33, and 35-37 are patentable over Ishii, Yang, and Pentico and ask that the rejection of these claims under 35 U.S.C. §103(a) be withdrawn.

D. The Rejection Of Claims 37-43, 45-46, 48-50, 51-53, 13, 15-16, 19, 23, 25-33, and 36 Under 35 U.S.C. 103(a) over Fulkerson in View of Yang Should Be Reversed

<u>Neither Fulkerson nor Yang teach a dichroic filter means configured to reflect an unfiltered portion of the light beam</u>

Like the rejections in view of Ishii, the Examiner admits that Fulkerson does not disclose a micro dichroic filter array and relies on Yang to provide this missing element. Office action, pp. 4-5, section 3. However, as explained above, Yang does not disclose a micro dichroic filter array where the elements reflect unfiltered light as required by the rejected claims.

<u>The Proposed Modification Would Fundamentally Change the Principal of Operation of the Prior Art Systems</u>

Moreover, even assuming for arguments sake, that Yang did disclose a micro dichroic filter array that reflected unfiltered light, it would not have been obvious to one skilled in the art to modify the systems disclosed by Fulkerson because such modification would fundamentally change the principle of operation of Fulkerson's systems, rendering them unsatisfactory for their intended purpose.

Fulkerson discloses color projection displays that do not use color filter arrays at all. Rather, Fulkerson achieves color display using either a color wheel or color filtering (e.g., dichroic prism, dichroic mirror, or color filter) that produces separate "color channels" that illuminate separate reflective LCDs. Fulkerson, col. 5, lines 40-64. In other words, as would have been understood by one of ordinary skill, in Fulkerson's systems each display panel, at any one time, is illuminated with light of a single color (e.g., red, green, or blue); Fulkerson's systems do not spatially synthesize a color image by providing an array of color filter elements on a single display panel so that each sub-pixel appears either red, green, or blue, for example. Thus, none of these systems utilize a filter *array* at all, nor would it have been obvious to a person having ordinary skill how to modify Fulkerson's systems to include a filter array, and, any modification of Fulkerson's systems to include a filter array would have fundamentally altered the principal of its operation.

Furthermore, as would have been understood by a person having ordinary skill in the art, using a micro dichroic filter array would involve use of an optical component (i.e., the filter array) that is more complex, and therefore likely more expensive, than the single dichroic filters disclosed by Fulkerson, defeating stated objectives of Fulkerson's – to provide optical systems

that are "mechanically simple" and "minimize[] the use of expensive optical components" (id., col. 2, lines 11-21).

As to the Office's rationale for modifying Fulkerson, the Examiner simply repeats the same arguments he presented for the combining Ishii with Yang, (Office action, p. 5, section 3) and fails to provide any reasoning as to why one skilled in the art would have modified Fulkerson's systems to include a filter array instead of the disclosed color wheel or other color filtering means.

E. Summary

Applicant requests that the rejections of claims 37-43, 45-46, 48-50, 13-16, 19, 23, 25-34, and 36 as being unpatentable under 35 U.S.C. § 103(a) be reversed.

The brief fee of $270 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of deposit account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: August 21, 2009

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Appendix of Claims

13. The system of claim 37, wherein the elements of the_micro dichroic filter arrays are configured to transmit primary colors.

15. The system of claim 37, wherein elements of the micro dichroic filter array of the first display panel are configured to transmit either red, green, or blue light.

16. The system of claim 15, wherein elements of the micro dichroic filter array of the second display panel are configured to transmit either red, green, and blue light.

17. The system of claim 15, wherein elements of the micro dichroic filter array of the second display panel are configured to transmit either cyan, magenta, and yellow light.

18. The system of claim 37, wherein the first and second color display panels are located at adjacent surfaces of the polarizing beam splitter assembly.

19. The system of claim 37, wherein the first and second color display panels are located at opposite surfaces of the polarizing beam splitter assembly.

20. The system of claim 37, wherein the polarizing beam splitter assembly is configured to split an illumination beam into a first input light beam and a second input light beam and direct

the first input light beam towards the first display panel and the second input light beam towards the second display panel.

21. The system of claim 20, wherein polarizing beam splitter assembly is configured so that the first and second input light beams have mutually orthogonal polarization states.

22. The system of claim 21, wherein system is configured so that the first input light beam and the portion of the first light beam reflected from the first display panel have mutually orthogonal polarization states.

23. The system of claim 22, wherein the system is configured so that the second input light beam and the portion of the second light beam reflected from the second display panel have mutually orthogonal polarization states.

24. The system of claim 37, wherein the polarizing beam splitter assembly comprises a single polarizing beam splitter.

25. The system of claim 37, wherein the polarizing beam splitter assembly comprises a plurality of polarizing beam splitters.

26. The system of claim 37, wherein the polarizing beam splitter assembly comprises a plurality of prisms arranged as a square.

27. The system of claim 26, wherein the prisms are right angle prisms.

28 The system of claim 27, wherein the right angle prisms have polarizing beam splitter coatings on their right angle surfaces.

29. The system of claim 37, wherein the polarizing beam splitter assembly comprises four polarizing beam splitter coatings arranged as a cross.

30. The system of claim 37, wherein the polarizing beam splitter assembly comprises four polarizing beam splitter cubes.

31. The system of claim 30, wherein the four polarizing beam splitter cubes are arranged as a square.

32. The system of claim 31, further comprising half wave plates positioned between the polarizing beam splitter cubes.

33. The system of claim 37, further comprising a projection lens configured to amplify the image beam.

34. The system of claim 37 further comprising first and second quarter wave plates respectively located between the first and second display panels and the polarizing beam splitter assembly.

35. The system of claim 37, wherein during operation the first and second display panels modulate the filtered portions of the first and second light beams reflected from the display panels so that the first and second light beam portions correspond to different view angles of an image.

36. The system of claim 37, wherein during operation the first and second display panels modulate the filtered portions of the first and second light beams reflected from the display panels so that the first and second light beam portions correspond to the same view angle of an image.

37. A system comprising:

first and second liquid crystal on silicon (LCoS) display panels each comprising a micro dichroic filter array, each micro dichroic filter array including multiple elements configured to transmit a portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portionof the light beam, so that the polarization of the unfiltered portion is not changed when leaving the display panel,

wherein each display panel is configured to reflect and modulate filtered portions from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions is changed when leaving the display panel; and

a polarizing beam splitter assembly configured so that during operation the polarizing beam splitter assembly combines the filtered portions of a first light beam reflected by the first display panel with filtered portions of a second light beam reflected by the second display panel to form an image beam, and the combined filtered portions of the first and second light beams have mutually orthogonal polarization states.

38. A system, comprising:

a polarizing beam splitter assembly including a plurality of polarizing beam splitter coatings arranged in orthogonal planes; and

first and second display panels positioned relative to the polarizing beam splitter assembly so that during operation the polarizing beam splitter assembly combines filtered light reflected from the first and second display panels to form an image beam,

wherein the first and second display panels each comprise a micro dichroic filter array, each micro dichroic filter array comprising multiple elements each configured to transmit a corresponding portion of an incident light beam, the transmitted portion being a filtered portion where the filtered portion from different elements are different colors, and each element being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion, so that the polarization of the unfiltered portion is not changed when leaving the display panel,

wherein each display panel is configured to reflect and modulate the filtered portion from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions are changed when leaving the display panel.

39. The system of claim 38, wherein the polarizing beam splitter assembly comprises a plurality of polarizing beam splitter cubes.

40. The system of claim 39, further comprising one or more half wave plates positioned between the polarizing beam splitter cubes.

41. The system of claim 38, wherein the polarizing beam splitter assembly comprises a plurality of right angle prisms.

42. The system of claim 41, wherein the polarizing beam splitter coatings are positioned on right angle surfaces of the right angle prisms.

43. A method comprising:

directing a first light beam to reflect from a first color liquid crystal on silicon (LCoS) display panel and a second light beam to reflect from a second color LCoS display panel, the first and second color LCoS display panels each comprising a micro dichroic filter array, each micro dichroic filter array comprising multiple elements each configured to transmit a corresponding portion of an incident light beam, the transmitted portion being a filtered portion where the

filtered portion from different elements are different colors, and each filter being further configured to reflect a portion of the incident light beam, the reflected portion being an unfiltered portion, so that the polarization of the unfiltered portion is not changed when leaving the display panel,

wherein each display panel is configured to reflect and modulate the filtered portion from the corresponding micro dichroic filter array within the display panel so that the polarization of at least some of the filtered portions are changed when leaving the display panel; and

combining the filtered portions of the first light beam reflected by the first display panel with the filtered portions of the second light beam reflected by the second display panel to form an image beam,

wherein the combined filtered portions of the first and second light beams have mutually orthogonal polarization states.

44. The method of claim 43, wherein the filtered portions of the first and second light beams are modulated with the first and second display panels so that the reflected filtered first and second light beam portions correspond to different view angles of an image.

45. The method of claim 44, wherein each element of the micro dichroic filter arrays are selected so that the filtered portions reflected by the first and second display panels are red, green, or blue.

46. The method of claim 43, wherein the filtered portions of the first and second light beams are modulated with the first and second display panels so that the reflected filtered first and second light beam portions correspond to the same view angle of an image.

47. The method of claim 46, wherein elements of the micro dichroic filter array of the first display panel are selected so that the filtered portions from the first display panel are red, green, or, and elements of the the micro dichroic filter array of the second display panel are selected so that the filtered portions from the second display panel are cyan, magenta, or yellow.

48. The method of claim 43, further comprising splitting an input light beam to form the first and second light beams.

49. The method of claim 48, wherein the first and second light beams have mutually orthogonal polarization states.

50. The method of claim 43, further comprising amplifying the image beam.

51. The method of claim 43, wherein the unfiltered portions of the first and second light beams are provided to a light recycle system for resubmitting the unfiltered portions to the first and second display panels.

52. The system of claim 37, further comprising a light recycle system for resubmitting the unfiltered portions of the first and second light beams to the first and second display panels.

53. The system of claim 38, further comprising a light recycle system for resubmitting the unfiltered portions of the first and second light beams to the first and second display panels.

Evidence Appendix

U.S. Patent No. 4,355,888

U.S. Patent No. 5,552,840 ("Ishii")

U.S. Patent No. 5,612,814 ("Yang")

U.S. Patent No. 6,280,034 ("Brennesholtz")

U.S. Patent No. 6,490,087 ("Fulkerson")

Related Proceedings Appendix

NONE